Review of Literature After Euclid

Literature After Euclid: The Geometric Imagination in the Long Scottish Enlightenment by Matthew Wickman (review)

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***Literature After Euclid: The Geometric Imagination in the Long Scottish Enlightenment*. By Matthew Wickman. Philadelphia: University of Pennsylvania Press, 2016. ISBN 9780812247954. 352pp. hbk. £45.**

This is a work of great erudition, setting Scottish literary history from *The Seasons* to MacDiarmid within the intellectual history of this period. It makes a very interesting and original claim: that literary innovation in the eighteenth and early nineteenth centuries can be understood in terms of the adoption and distortion of contemporary mathematical ideas, and geometrical ideas in particular. However, it does not construct an argument which uses that erudition to justify that claim. The starting point for this book seems to be the connection sometimes made between modernist art and the non-Euclidean geometries of the nineteenth century, combined with Thomas Reid's apparent anticipation of those geometries in a passage of the *Inquiry* (1764). But Wickman coins the phrase 'late Euclidean', not to name a type of geometry, or a period in the history of mathematics, but to indicate 'the deployment of a language of classically conceived nature to strange new ends' and 'a literature imagined, at once, in the manner of and as a successor to Euclidian norms' (p. 5). The Introduction, and chapters 1 and 2, on the Scottish Enlightenment and Scott respectively, attempt to connect geometry to literary texts but can only do so through wordplay, free association and false logic. The following three chapters, on the picturesque, Burns, and Thomson, are often stimulating and insightful, but precisely to the extent that they abandon the attempt to frame their subject matter in terms of the 'late Euclidean'.

In the early chapters, 'geometry' is often a place-holder for something more general: the abstract as opposed to the concrete, space as opposed to time, the immanent as opposed to the mediated, and so on. But these terms can only be translated back into 'geometry' by some striking departures from logic. For example, the plays of Joanna Baillie involve an element of abstraction; geometry is an abstract science; therefore, Baillie's plays reveal a mind 'that remained evocatively Euclidean' (p. 3). In Reid, the 'geometry of visibles' is a 'natural language' (its signified is the 'geometry of tangibles'), to be distinguished from 'artificial language' (compared by Reid, in contrast, to algebra). That is correct; but Wickman then has to misread Hugh Blair's distinction, in *Lectures* XIV, between 'Figures of Words' ('Tropes') and 'Figures of Thought' (a distinction Blair immediately identifies as 'of no

great use' nor 'always very clear') as a distinction between 'artificial' and 'natural' language in Reid's sense (they are equally 'natural' for Blair) so that 'tropes, essentially, are algebraic, while figures are geometric'. Another misreading, of Macpherson's 'Dissertation', then claims Gaelic as a 'natural language', again, it appears, in Reid's sense, to conclude that the aesthetic of *Ossian* 'was thus modelled on a geometric analogy – which is to say, on the (geometric) ideal of "evidence" ' (p. 33).

Certainly, these chapters also refer to the actual practice of geometry in the specific context of Scotland in the eighteenth and early nineteenth centuries, and especially the work of Colin Maclaurin and Robert Simson. But there is no sustained discussion of any of the Scottish mathematical texts that are cited (Simson's *career* gets some attention in chapter 4). Adelene Buckland has written very interestingly of Scott's friendship with the mathematician John Playfair in *Novel Science* (2013), but there is nothing here of that sort of specificity. Scott's novels reflect on their own representational procedures; the non-Euclidean geometries that emerge at around the same time as Scott's novels describe straight lines that bend around on themselves (because inscribed on a sphere); therefore, Scott's narrative practice anticipates a 'non-Euclidean poetics'. The organisation of the reader's sympathies by the narrative perspective of *Waverley*, on the other hand, can be expressed as an algebraic formula; algebra, we must remember, is different from geometry; therefore, Scott's novels combine a geometric poetics with an algebraic epistemology, sharing the 'syncretic character' of 'mathematics in England and Scotland (and, indeed, throughout much of Europe) . . . since at least the sixteenth century' (p. 70). There is much to be said about the combination of narrative self-consciousness and sympathetic identification in Scott's handling of narrative point-of-view. But an approach which ends up comparing Scott's novels with all of modern mathematics in all of Europe has demonstrated only that geometry and algebra and the difference between them are of no help in thinking about this.

The later chapters are much more rewarding, but then they are built around essays which have appeared elsewhere, and they gain nothing from being re-framed in terms of the 'late Euclidean'. Chapter 3, for example, is an expansion of Wickman's essay on 'Travel Writing and the Picturesque' in *The Edinburgh Companion to Scottish Romanticism*. There, a paragraph on Johnson's definition of 'imagination' concludes by comparing this to the role in Hume of 'mental pictures': when the latter rearrange rather than

simply reflect the materials provided by our senses, then, says Wickman, 'they function in a manner akin to the picturesque' (p. 68). In *Literature After Euclid*, and without any other changes to the preceding paragraphs, this has become, 'then they function geometrically' (p. 118). When the terms 'picturesque' and 'geometrical' can simply be substituted for each other, you have to wonder how much meaning is retained by either. The chapter on Burns, developed from 'Robert Burns and Big Data' in *MLQ* (2014), has not required this sort of radical revision. But its genuinely insightful readings of 'To a Louse' and 'To a Mouse' still seem conceptually discontinuous from the literary theory and history of mathematics which surrounds them; this chapter is especially undermined by Wickman's insistence that the visual representation of data in graphs and charts, such as those deployed by Franco Moretti in *Graphs, Maps, Trees* (2005), is an exercise in geometry (it was invented in the Scottish Enlightenment by a Playfair, but by William, not his brother John). The most satisfying chapter is that on Newton and *The Seasons*; but even here, because Newton's enterprise has already been described as 'ambivalent' because, like Scott's, 'geometric *and* algebraic' (p. 50) it is hard to see how its observations have been made any clearer by imposing on them the terms and distinctions set up by this book.

So while segments of this book have useful points to make, it fails to shape a convincing case for the 'late Euclidian' as a critical category; too many of its lines of argument remain at a tangent to the theme of 'geometric imagination' more generally. My vocabulary in these two sentences would certainly be enough for Wickman to claim this conclusion as an example of both: but it really isn't.

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